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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,659	12/21/2001	Christer Aslund	2640-102	1985
6449	7590	04/14/2004	EXAMINER	
ROTHWELL, FIGG, ERNST & MANBECK, P.C. 1425 K STREET, N.W. SUITE 800 WASHINGTON, DC 20005			JENKINS, DANIEL J	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/018,659

Applicant(s)

ASLUND, CHRISTER

Examiner

Daniel J. Jenkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

1. The Examiner has carefully considered Applicant's response of 12/11/03. The Examiner agrees with Applicant's statement of support for the presented amendments, and withdraws the rejection in regard to this issue. The Examiner withdraws the prior rejection to Kankawa et al., finding that the injection molding of Kankawa et al. would not be included in the "pressing" limitation of Applicant. At this time, the Examiner makes a new rejection which is appropriately not made final.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/36214 (WO'214) in view of Aslund et al.

WO'214 discloses a method for forming a sintered body comprising:

providing a mixture of an iron based powder (page 4, lines 27-35) and a binder comprising gelatin (page 4, lines 19-22);

pressing the mixture to form a green body (page 5, lines 25-29);

heating the green body to remove the binder (page 6, lines 10-14); and

sintering the debound body to form a sintered body (page 6, lines 2-12).

WO'214 further discloses wherein the gelatin is present in an amount of 0.5 to 1.5 % (page 5, lines 13-20), which substantially overlaps the range claimed by Applicant, formed from a slurry coating of the iron based powder.

The Examiner finds that the two step heating of WO'214 would inherently result in the residual carbon from the gelatin binder to become diffused into the iron based powder. Applicant's observation of this effect in the two stage heating in his invention conducted under the same conditons, does not impart patentability to the present claims.

The overlap and ranges that lie inside the prior art establishes a prima facie case of obviousness (see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)), one of ordinary skill in the art allowing for increased binder content in order to form sintered bodies of lower density.

WO'214 further discloses wherein the mixture further comprises alloying elements including carbon, which is added in the art in the form of graphite.

However, WO'214 does not disclose wherein the gelatin removal takes place under a non-oxidizing atmosphere, but simply states that the first heating takes place in air.

Aslund et al. teach at col. 4, lines 1-3, that gelatin removal can take place in air or an inert atmosphere including hydrogen in the same field of endeavor, that these atmospheres are interchangeable in this step.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use hydrogen as the gelatin removal atmosphere in the invention of WO'214 as taught by Aslund et al. in order to continue to use a similar inert atmosphere

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in the next sintering step which WO'214 discloses as being performed in an inert atmosphere including hydrogen.

WO'214 does not disclose the amount of carbon in the formed sintered body, but states that his invention can be used in the formation of carbon steels. The Examiner looks to the An Introduction to Metallurgy to state the amount of carbon in common carbon steels, and finds that the range is less than 1.7% for common carbon steels, overlapping the carbon content as claimed by Applicant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Jenkins whose telephone number is 571-272-1242. The examiner can normally be reached on M-TH 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1242. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel J. Jenkins  
Primary Examiner  
Art Unit 1742

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